

On the best Method of Collecting and Arranging Facts, with a proposed new Plan of Common-place Book. By WILLIAM AUGUSTUS GUY, M.B., Cantab. Professor of Forensic Medicine, King's College, London, and Assistant Physician to the King's College Hospital.

THE advantages of order, method and arrangement to all who are engaged in the pursuit of learning or science, are too generally recognised to require any comment. Without some attention to them it is almost impossible either to learn thoroughly that which is already known, or to add anything to our present stores of knowledge. Now, there are two ways in which we may hope to extend the boundaries of knowledge;—either by original observations and experiments, or by a searching and rigorous analysis of the facts collected by those who have preceded us. This latter employment of our faculties can alone give us a claim to the praise of learning, too often awarded to a useless and ill-assorted collection of facts and theories, loosely held together, and unprofitable alike to their possessor and the world. Some share of learning, in its true and best sense, is essential even to those who are engaged in original investigations, as, without it, they may enter upon enquiries which have already been successfully undertaken, and find, after much thought and labour, that their pains have been bestowed in vain.

But if some share of learning be necessary to all who devote themselves to the pursuit of science, how much more essential is it to those who are engaged in the study of sciences of observation. These sciences are characterised chiefly by the vast number of objects which they embrace, the compound and complex nature of the facts which they contemplate, and the varying proportions in which the elements, so to speak, of these facts are combined. Those sciences especially which have a direct bearing on the welfare of mankind become of necessity practical arts, and engage in their service a number of votaries proportioned to their importance, and to the frequency of their applications. This remark applies with peculiar force to the science of medicine, which, in every country, and in all ages, has had a larger number of professors than any other science whatever; and, as a necessary consequence, has received scientific and practical contributions from a much greater number of hands. The surpassing value of health gives so great an importance to every application of the healing art, and surrounds individual cases with so much interest, that medicine has become, of necessity, a science of detail, and its records a collection, for the most part, of isolated facts, either really curious in themselves, or invested with attributes of wonder and importance by the inexperience of those who have observed them. The engrossing nature of the practical pursuits of the physician, by leaving him little time for collecting such facts as may form the basis of a wide generalization, combines with the cause I have just pointed out to fill medical books with detached cases, hasty conclusions, and crude hypotheses. Not that medicine does not possess its well-digested collections of facts, and its true theories; all I would assert is, that these bear but a small proportion to its imperfect details, and its superficial conclusions. But the isolated facts which have been collected, and the suggestions which have been from time to time thrown out, form a rich mine of wealth which may be turned to good account if properly worked. There

are ample materials, but they can only be rendered available to the improvement of the science and the art of medicine, by bringing into use accurate methods of arrangement, and powerful instruments of analysis.

The science of medicine is here put prominently forward, partly because it is the one with which I am best acquainted, and which has suggested the method of arrangement I am about to advocate; and partly because, combining as it does, in an extraordinary degree, all the difficulties which attach to sciences of observation in general, it stands more in need than any other science whatever of improved methods of collecting, arranging, and classifying facts. The remarks which apply to the science of medicine, however, are applicable, though perhaps in a less degree, to other sciences of observation, the most advanced of which has not yet outrun the necessity for improved methods of investigation. Even that *social* science which it is the great object of the Statistical Society to promote, must seek in the imperfect records of the past for information which it cannot safely neglect, and must turn that information to account by resorting to the same methods which are calculated to improve other sciences of observation. Nay, the necessity must soon arise of submitting the facts collected by improved methods, and the results expressed in the more accurate language of numbers, to the same process of comparison and analysis to which we now submit the imperfect data of those who have gone before us. It is because the Statistical Society, in addition to its first and great object of collecting facts bearing upon man's social condition, and expressing the results of those facts in the simple and concise language of figures, takes upon itself to draw up plans and instructions for the guidance of those who are engaged in making observations, that the following suggestion of a new method of common-place book, seems to find a suitable place in the pages of its Journal.

A man can scarcely be said to read to much purpose who trusts his learning to the care of his memory, nor can he observe with advantage who consigns his facts to the same uncertain keeping. In order to turn either the one or the other to good account they must be committed to writing. But though the knowledge thus transferred to paper is certainly more available than that which is entrusted to memory, it will be of comparative little use unless it be so arranged as to be easily found when wanted. There are very many who are deeply impressed with the advantage of committing to paper the facts which they glean from authors or from their own observation, but who nevertheless contrive to render their labour unserviceable by the neglect of method. They either write their notes on the first scrap of paper which comes to hand, and then place it in their pocket or in a drawer, to swell a large collection of similar materials illustrative of all sorts of subjects, and heaped together without any attempt at arrangement; or they make their entries in a book in the order in which they present themselves to their notice. This latter plan possesses some advantages which the former wants. The loose papers accumulate till they become so numerous as to deter the most patient from any attempt at arrangement, and the most enterprising from the task of discovering any particular fact among so large a heap of rubbish. Their fate, sooner or later, is to light a fire or a candle. A book, on the contrary, keeps the several facts together, and

is likely to be occasionally referred to so long as the entries are few in number; but as they increase, the search after any particular passage becomes more and more difficult, and wastes more and more time, till, at length, it is allowed to slumber quietly on its shelf, fortunate if it be not condemned to be sold as waste paper. If the materials thus collected are ever turned to any account it must be at a great sacrifice of time.

The most obvious improvement of which such a book as the one I have described is susceptible, is the formation of a narrow column at the side of each page, containing brief references to the subject matter of the several entries, so that the eye in glancing down the pages may meet the fact of which it is in search. The next improvement is the formation of an index by which the several subjects may be referred to at once, and the labour of the search be materially abridged.

Locke adopted both these arrangements in the common-place book which goes by his name, and, as he thought his method of sufficient importance to deserve publication, I shall briefly describe it. His book was furnished with an index, and blank pages numbered in the usual way. His index occupied two pages, each divided by a vertical line into two equal parts, and each of these parts again into a smaller and larger vertical column by lines drawn near the left-hand margin. The entire page was then subdivided into 10 equal parts (5 on each half-page) by as many horizontal lines. In this manner the two pages were divided into 20 parts, and each of these 20 parts into two vertical columns of unequal size. In each of the 20 smaller vertical columns a letter of the alphabet was written, the column C being shared with K; that of I with J and Y; and that of U with V and W. A second small vertical column was now made parallel to the first, and each of the five parts into which it was divided was again subdivided into five equal parts by as many horizontal lines, which were also extended across the five divisions of the larger column. In the subdivisions thus formed, the five vowels, *a, e, i, o, u*, were written. In this manner the index was made.

To make this description more intelligible, I have annexed a plan of the index, p. 366.

The blank pages were merely divided by a vertical line drawn near their left-hand border into a small margin and a large space. When an entry was to be made in this common-place book, two pages were chosen facing each other, and on the first of these the extract or the fact was entered, the subject to which it referred being written in the margin in larger characters. The fact or extract was found by entering the number of the page in the index, in the division corresponding to the initial letter of the word in the margin, and in the subdivision corresponding to the first vowel occurring in the word. Thus, the index to the word *Acheron* was the page in which the word occurred, entered in the subdivision *e* of the letter *A*. A separate page being thus devoted to a combination of the initial letter with a first vowel, all topics designated by words beginning with the same initial letter and first vowel were entered in the same page. Thus, all that referred to the subject *Aer* was entered in the same page with the subject *Achcron*, and so on for any number of subjects. Such is the plan adopted and recommended by Locke, and employed, as I have reason to believe,

though with some slight modifications, by most persons who make use of a common-place book.

It is strange, indeed, that such a man as Locke, impressed with the value of method, should ever have adopted so imperfect and arbitrary a plan, or having once adopted it, that he should not have improved upon it; for surely nothing can be more opposed to all method than the grouping of subjects together, without any other bond of connexion than an initial letter and a first vowel. One obvious improvement on this plan at once suggests itself, and that is to set apart one or more pages for each subject, and to extend the index so as to give a page or two pages facing each other to each letter of the alphabet; if the index is likely to be extensive these pages may then be subdivided into five columns headed by the five vowels, as in Locke's plan.* This is the form of common-place book which I first adopted and used for some years, till experience suggested the necessity for an improved method.

The objection to Locke's common-place book, as I have just stated, is this—that a number of totally different subjects are entered in the same page, or succession of pages, which subjects are held together by no other relation than that of an initial letter and first vowel. It is true that so long as these entries are few in number there is little loss of time in referring to them, but if they become very numerous many pages may be passed in review before the desired passage meets the eye. But even this inconvenience is not of sufficient moment to require the adoption of an improved method, where each of the several entries refers to a different subject. It is only when a great number of passages referring to the same topic are scattered through a succession of pages that the inconvenience of this plan is severely felt. It was this obvious inconvenience which induced me to adopt the improvement of devoting a separate page, or series of pages, to each separate subject. But even here I soon found the same objection to apply which lay against the common-place book of Locke. As long as the entries referring to any particular topic were few in number, my common-place book answered well enough; but when the subject began to occupy many pages, I found that if I wanted to make use of it, to digest the materials which I had collected, to analyze them, or to write about them, I had to re-arrange the whole, and to place extracts or facts of my own observing which related to one part of my subject, or threw light upon any isolated question connected with it, by themselves, that by viewing them in connexion I might better understand their bearing and estimate their value. Thus, the original labour of inscribing the several extracts or facts in my common-place book had to be repeated with regard to all those parts of my subject to which I was induced to pay particular attention. To place the inconvenience of this method in a strong light, I may instance one subject which occupies upwards of sixteen closely written pages in a large quarto volume, contains upwards of 250 quotations, abstracts, facts, or

* Todd's "Index Rerum," which is merely an index constructed in this way, is very useful in making references to authors. The index occupies the whole of the book, and a number of pages is given to each letter of the alphabet proportioned to the frequency of its occurrence in names or subjects. These pages are then portioned out among the initial vowels, and the entries are made on the page corresponding to the initial letter and first vowel of the author's name or subject.

references, and embraces almost every topic of interest connected with it. With all the assistance derived from the marginal references, much time must necessarily be lost in selecting the quotations or facts referring to any one symptom observed, or remedy employed, or bearing upon any disputed point; and it is obvious that the information collected could only be made available by being re-arranged, whether for my own information or the instruction of others.

As a remedy for this obvious defect, two plans suggest themselves; the one is the employment of a separate common-place book for each separate subject, each page or succession of pages being devoted to a distinct subdivision of the subject, and this subdivision being entered in the index, or the use of separate leaves of paper either arranged in order in a portfolio, or converted into a book by means of a paper-holder. When the attention is directed to one or two subjects only, the employment of books will perhaps be preferable to that of loose papers; but when the number of subjects, as often happens, is very considerable, and extends through the whole range of a vast science, the expense alone might prove a valid objection. The use of a book, too, is, in any case, incompatible with accurate arrangement, as each division and subdivision of the subject must continue to occupy the place in the volume which was first assigned to it. For these reasons loose papers are to be preferred to books.

The plan which, after long experience of different methods, and many successive trials, I have at length adopted, is the following. I furnish myself with a large quantity of paper cut into half-sheets of the size of large letter-paper. I form a margin about an inch broad, a column about two inches broad, and a second sufficiently broad to receive two figures, by means of vertical lines drawn towards the left-hand margin of the paper. The margin is not written upon, the first column is intended for a short reference to the subject matter of the several entries, the second narrow column for numerals employed to facilitate reference from one paper to another, in case the entry, as often happens, refers to more than one subject, and the remainder of the paper for the entry itself. If the entry be a quotation or abstract from a book, the name of the author and title of the work, with the date and page, are subjoined.* At the right-hand corner of the paper the subject is distinctly written; the object of this is to enable me to replace the papers should they by any accident be mislaid. Beneath this, but in the centre of the paper, the subdivision of the subject is written, and below this again the distinct proposition, general statement, fact, or theory which the first entry illustrates. If fresh facts illustrative of the same point occur in the course of my reading or observation, they are immediately entered on the same paper; and when the first paper is filled, a second is provided with the same headings, the figures 1 and 2 being written at the right

* Where many extracts are taken from the same author it is desirable to avoid repeating the exact title of the work after each quotation, and yet it is equally desirable to have at hand the exact title, either for the purpose of citing its authority, or of referring to it again. With this view Locke's suggestion may be followed with advantage, which is to keep a book for the entry of the titles of works, with the date, size, and number of pages. By noting the number of pages contained in the book, we are enabled by a simple calculation to refer to a different edition or copy from that which we at first employed.

hand corner, and so on for any number of papers. According to this plan classification is carried to the utmost degree of minuteness, each separate leaf containing not merely a subdivision of the principal subject, but a distinct proposition, and no two propositions being allowed to find place on the same leaf. Every fresh illustration is entered as soon as it occurs, furnished with its marginal reference, and its distinctive numeral.

Thus to take the first example that comes to hand. The subject is, the influence of the mind upon the body; the subdivision, the influence of the imagination on the senses; and the particular point to be illustrated, its influence on the sense of sight. This entry will be made in the following manner:—

INFLUENCE OF THE MIND ON THE BODY.

OF THE IMAGINATION ON THE SENSES.

Sense of Sight.

Ingenious mode of detecting a Thief.	I.	The Kamtschadales have a firm belief in the supernatural power of the Schamans. "A Kosak once profited by this credulity to regain his stolen property, in a very ingenious manner. While on a journey with several Kamtschadales, he had some of his tobacco stolen from him, and after questioning each individual separately, he was unable to discover who was the thief. He accordingly took some sticks, and making them of equal lengths, gave each of them one, with the assurance, that the stick of the thief would infallibly grow longer by the power of schamanry. This unpleasant intelligence had such an effect on the imagination of the thief, that he actually conceived that his stick did increase in length, and thought to relieve himself from this dilemma by breaking a piece off. The next morning every Kamtschadale carrying back his stick, the thief was discovered."— <i>Sarytschew's Travels</i> , p. 68.
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The influence of the imagination in misleading the senses is further illustrated by entries proving its effect on the sense of hearing, touch, &c., all entered in the same form as the above.

Sometimes one heading alone is sufficient, as in the following example:—

SEA SCURVY.

Mortality.

Nearly the whole of the Crew. Peron.	I.	Peron says the voyage to the Southern Hemisphere, "deprived us of nearly the whole of our crew."—Vol. i. p. 262.
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Here follow quotations from Anson's Voyages, &c.

If these papers were carelessly thrown into a drawer together, they would be scarcely more useful than so many scraps written on loose papers of different sizes and shapes. To turn them to good account, it is necessary to add careful arrangement to minute subdivision. This is easily effected. The first paper referring to any given subject is placed, as soon as it is written, in a rude portfolio, made of a folded sheet of paper of larger size, and the name of the subject is written in distinct characters on the outside. This portfolio is then placed in a drawer, or box, with others referring to the same class of subjects. The drawer or

box may, if necessary, enclose a list of the subjects contained within it, but unless they are numerous this will not be required. Any fresh papers illustrative of the same subject, but of different subdivisions of it, are placed at first in the same portfolio. As soon, however, as these papers accumulate to such an extent that time is lost in searching for any particular proposition, the necessity of more minute arrangement makes itself felt. To effect this, those papers which refer to any subdivision of the principal subject are collected and placed in a separate portfolio, with the name of the principal subject and of the subdivision written distinctly on the outside. This is done with regard to all the subdivisions; and thus a number of portfolios, with the subject and subdivision distinctly written on the outside, are substituted for the single one which in the infancy of the collection was sufficient to contain all the information which had been brought together. These portfolios may then be placed in a separate drawer or box. When they have become very numerous, and their contents have greatly increased, they are ready to be converted into a book. This is done by first arranging the several portfolios in the order in which their contents ought to be placed, and re-arranging the contents themselves with great care. We now substitute for the several portfolios an equal number of leaves of paper of a stronger quality than those on which the extracts are written, and of a larger size. These papers are cut so as to form an index, and lettered. The contents of the portfolios are then arranged in order after the several papers forming the index, and the whole assemblage of papers is prefaced by a list of the subjects, with a reference to the letters of the index. In this manner both the place and use of the index is inverted, and instead of occupying the first pages of the book, it is, like Todd's "Index Rerum," contained in the body of the book, whilst the first page (which is so cut as to leave the index uncovered) contains a list of the several subdivisions, with a letter of the alphabet placed after each of them. In making use of this book we have merely to cast the eye down the title-page, or table of contents, to find the subject and the index-letter by which it is distinguished, and then turning over the page of the index which carries that letter upon it we find all the information collected upon that subject in the papers which follow it. To convert these papers into a book, all that is required is a cover resembling the outside of a book, with a broad flexible leathern back, and a spring consisting of two pieces of steel, joined at either end by a rack pierced with holes. By making one of the pieces of steel moveable any degree of pressure may be exercised on the contents of the volume. As fresh materials accumulate they may be placed, *pro tempore*, in the position which they ought to occupy, and admitted into the volume by the re-adjustment of the spring. The spring is applied to the flexible leathern back, and compresses the margin of the paper, which was left blank for that purpose.*

This process of converting loose papers into books is what has gradually taken place with regard to the Pulse, a subject which has long interested me, and in illustration of which I have collected extensive materials in the course of my reading or experience. At first the

* The spring, which is the invention of my friend the Rev. J. Edwards, of the King's College, may be procured with covers, ruled papers, and indexes, at Fisher's, Bookbinder and Stationer, 1, Hanway-street, Oxford-street.

subject occupied a single page in my common-place book, then, when I adopted the plan I am now advocating, a separate portfolio; then the effect of posture on the pulse separated itself from the other parts of the subject, then the diurnal variations, then the relation of the respiration to the pulse, and so on. The pathology of the pulse soon became sufficiently important to be detached from the physiology, and split up into several sections—such as the pulse in consumption, &c.; then the effect of remedies on the pulse became an important subdivision, and digitalis, opium, tobacco, nitre, &c. had each one or more pages devoted to them. The loose papers having thus accumulated were converted into a book, and took their place upon my shelves.

In the manner I have described several subjects are growing day by day under my hand, extending themselves in every direction, and arranging themselves almost mechanically, requiring no intense application at any moment, and forming rather an amusement than a toil. My papers reason for me, for each contains a single proposition illustrated by facts gleaned from books or from observation. If an essay or a book is to be written, it is ready to the hand; if a lecture is to be delivered the materials are already arranged. A few words will connect the detached propositions, and furnish forth a discourse rich in learning or in facts.

Such are the principal features of a plan which I have myself adopted after some experience of the defects of Locke's system of common-place book, even in its most improved form, and which I venture to recommend with confidence as a means of economizing time, of encouraging habits of order, so essential to clearness and precision of thought, and of heaping up materials always ready for use. I know indeed of no means by which reading is likely to be rendered so profitable as by the reflection which must be exerted on every fact as it is thus arranged in its proper place, and in due relation to others; and I know from actual experience, the great superiority of a method which implies the constant exercise of reason and reflection over that which, consisting merely in transcribing the thoughts of others, is but too apt to convert the man of learning and science into a mere amanuensis.

“He who reads

Incessantly, and to his reading brings not
A spirit and judgment equal or superior,
Uncertain and unsettled still remains,
Deep versed in books, and shallow in himself.”

And these lines apply with equal force to those who write incessantly without digesting and arranging that which they transcribe.

The mental training implied in the employment of such a method as that which I have described, the necessity of ascertaining the precise meaning and scope of every passage committed to paper, and of expressing it in the fewest possible words, form the chief recommendation of the plan which I propose. Another advantage which it possesses over the ordinary forms of common-place book, is the close correspondence of the method itself with the mental process by which sciences are built up. First, a single fact is observed, then many others resembling it in some general features; then, with accumulation of observations, confusion, and an effort at subdivision; then the formation of smaller groups, and lastly the re-union of the several groups with others formed by a similar process, and the construction of separate sciences.

Hitherto, I have spoken of this method of common-place book as applicable only to science. It is at least equally applicable to learning and literature. The scholar may collect passages in illustration of disputed points in philology; the historian may bring together the scattered materials of history; the author, in the lighter walks of literature, may cull the flowers of fancy, or the gems of wit; and the divine may heap up his treasures of sacred learning; each will find such materials as he possesses readily available for the purposes to which he wishes to apply them.

But the best use to which this, or any other similar method admits of being applied, is the evolution, so to speak, of new branches of science, and occasionally of entire sciences, from those of which they formed a part. As examples of such separation I may instance forensic medicine, which has lately detached itself from the science of medicine in general, and become an independent branch of study, and the still more important one of Hygiene, which promises soon to follow the example of its sister science. The materials for the construction of both these sciences originally lay wrapped up in works on the several branches of medical knowledge, and are not yet completely separated from them. It is only by a method which seizes each fact or illustration as it occurs in works on the original science of which the new sciences are off-shoots, and places them at once in the position which they ought to occupy, and the point of view in which they ought to be contemplated, that such sciences can be speedily and securely built up. The remarks which apply to the formation of new sciences, apply equally to the more complete illustration and expansion of subjects of importance which have not hitherto received the attention they seem to merit. Almost every science abounds in subjects of this kind which, without being sufficiently important to deserve undivided attention, might form a source of amusement and relaxation from severer studies. The facts in illustration of such subjects would accumulate slowly and imperceptibly, until they grew to the size of goodly volumes, which, if not published to the world, might form an acceptable bequest to some of our public libraries. The complete and minute arrangement of their contents would give them a value scarcely inferior, in some respects even superior, to that of printed volumes. Men spend their lives in collecting, preserving, and arranging material objects in illustration of the natural sciences—in making museums at great labour and heavy cost; with much more ease, and at the expense of a few reams of paper, they might collect museums of facts and thoughts, arranged with equal accuracy, and, though less showy, not less useful. By this means they might satisfy, at the same time, their love of knowledge, and that passion for accumulation which is always seeking its own gratification, whether by the hoarding of wealth, the collection of natural objects, or the heaping up of the more hidden treasures of the mind.*

I have already made a passing allusion to the use of this method in the service of Statistics, and I now propose to give an example of its

* There is still one other use to which this method of arrangement may be applied, and that is the formation of "*Catalogues Raisonnés*." I have already used it with advantage in making a catalogue of the books contained in the medical library of the King's College, and can speak with confidence of its advantages when so applied. Without such a catalogue a library is deprived of the greater part of its value.

application to that purpose. As statistical facts, and the theories deduced from them, differ from other facts and other theories only in the dress they wear, the same plan which admits of application to the one, may be used with advantage in the service of the other. Two points especially deserve attention in all statistical enquiries, *viz.*, the circumstances under which the individual observations are made, and the numerical results to which they lead. Those who are most familiar with statistical researches will be most ready to acknowledge the necessity of some method by which both these points shall be accurately recorded. The plan which I have described offers every facility for accomplishing this object. As an example of its use, I have selected the subject of the "Growth of the Body," which, amongst other points of interest, includes the subject of stature—a subject which has been ably examined by Hargenvilliers, Villermé, Quetelet, and others. Taking the stature of adult males in different countries, as the part of the subject requiring illustration, it will be found that no two statistical results hitherto obtained are strictly comparable, and yet that the authors who have written upon the subject, have thrown them together as if they really admitted of comparison. Thus taking the militia regiments of different countries as standards of comparison, we find each country prescribing a different stature as that below which men shall be inadmissible to serve; and some statistical returns include those only who are actually admitted, others, all who were presented for admission. Again, if we compare two countries in which the conscription is in force, both of them shall fix a different standard of height, and a different age. If we turn to the observations made on civilians, some important point is omitted in one case, which is attended to in another, or the parties measured belong to different classes of the community. Nevertheless, in spite of all these discrepancies, the facts in themselves deserve to be recorded, and to be reserved till other facts, in every respect comparable, have been collected. The facts in illustration of this, as of many other subjects, are often found where they are least to be expected; and whether they are written down at the time, or referred to when wanted for immediate use, it will be equally necessary to ascertain and express in writing the exact value of those facts, preparatory to throwing them into the form of a regular treatise. A short time since, in the course of my reading, I met with some interesting facts in illustration of the subject of stature in the "Edinburgh Medical and Surgical Journal," and I now make use of them as an illustration of the employment of my system of common-place book for statistical purposes. The principal subject, which includes that of stature, is the growth of the body; of this subject stature is one of the subdivisions, and of this again the stature of adult males forms a part. The stature of adult males may be determined in different ways, but the most likely means of arriving at it, is by the comparison of the militia, conscripts, or regular army of different countries. But the difficulty is to find facts strictly comparable. In the absence of these, and with a view to arrive at approximative results, we must class such facts together as bear the closest resemblance, taking care to state all the known circumstances under which the measurements are made. This statement is made in the larger columns, whilst the smaller one exhibits the numerical results obtained. The following example will sufficiently explain my meaning.

GROWTH OF THE BODY.

STATURE OF ADULT MALES IN DIFFERENT COUNTRIES.

Militia Regiments.

I.

In the "Edinburgh Medical and Surgical Journal," vol. xiii., p. 260, the stature and circumference of the chest are given in 5,731 men belonging to 11 Scotch militia regiments. The facts were furnished by an "army contractor, a man of great observation and singular accuracy." The age is not stated. Not stated whether the men (which is highly probable) were measured in their shoes. Not stated whether any, or what, standard was prescribed.

SCOTLAND.

Maximum.

ft. in.

6 1

Minimum.

ft. in.

5 4

Mean.

ft. in.

5 8

Maximum.

ft. in.

6 1

Minimum.

ft. in.

5 4

Mean.

ft. in.

5 8

Of these 5,731 men there were—

	ft. in.	ft. in.	No. of Men.	Per cent.
From	5 4	to 5 5	721	= 12.58
„	5 6	5 7	1815	= 31.67
„	5 8	5 9	1982	= 34.58
„	5 10	5 11	896	= 15.63
„	6 0	6 1	317	= 5.54

100,00*

The following Table shews the average stature in the 11 militia regiments belonging to different counties in Scotland. The greatest number from which any one average was taken was 736 (Argyll), the least, 210 (Kinross):—

Greatest Average	Regiments.	Average Height	ft. in. lines.
ft. in. lines		in Inches.	
5 8 7	Kinross.	. . . . . 67.20	5 7 2
Least Average.	2nd Fife	. . . . . 67.29	5 7 3
ft. in. lines.	Highland Lanark.	. . . . . 67.39	5 7 4
5 7 2	2nd Argyll	. . . . . 67.74	5 7 9
	1st Argyll	. . . . . 67.76	5 7 9
	2nd Edinburgh	. . . . . 68.04	5 8 0
	East Stirling	. . . . . 68.06	5 8 0
	Annan and Eskdale	. . . . . 68.15	5 8 2
	Peebles.	. . . . . 68.38	5 8 5
	Kirkcudbright.	. . . . . 68.59	5 8 7
	6th Lanark	. . . . . 68.60	5 8 7

CANTON OF
GENEVA.

11.

The following results were obtained from the militia of the Canton of Geneva, for the years 1805-1814. The smallest stature admitted was 4 ft. 9 in. (pied de Roi = 0.32484 mèt.) = 5 ft. $\frac{3}{4}$ in. English. Age 20 years 1 month, to 21 years 1 month, giving a mean of 20 years 7 months. There were, however, some few below 20, and some few above 21. The average would be about 20 $\frac{1}{2}$ years. Not stated whether or not the men were measured in their shoes. Total number of men 2,940.

Maximum height, 6 feet 3 inches 7 lines English.

Minimum „ 5 „ 0 „ 9 „

Mean „ 5 „ 6 „ 3 „

"De la taille moyenne de l'homme dans le Canton de Genève, par M. Edouard Mallet. Memoire lu à la Société de Physique et d'Histoire Naturelle, le 17 Decembre, 1835."

Maximum.

ft. in. lines.

6 3 7

Minimum.

ft. in. lines.

5 0 9

Mean.

ft. in. lines.

5 6 3

Age.

19—22.

Mean.

20 $\frac{1}{2}$.

* This calculation in the original is incorrect.

Though these two results are not strictly comparable, they resemble each other sufficiently to admit of being placed under the same heading. The particulars mentioned in the text shew in what the statements of the authors are deficient, and in what points the facts actually collected differ. I have omitted a long table, extracted from M. Mallet's "Memoire," because I was anxious to avoid extending my illustration too far; but this table, which gives the number of men, and the number per cent. at different statures, may be safely compared with the facts reported in the "Edinburgh Medical and Surgical Journal," provided it be true that the growth of the body is nearly completed at the 21st year,* and that the measurements were taken in the same way, either with or without shoes. On comparing the table in the "Edinburgh Medical and Surgical Journal" with that given by M. Mallet, I find that though the maximum height of the Geneva militia exceeds that of the Scotch militia regiments, the number of men of great stature in the latter is much more considerable, as will be seen from the following comparison:—

	Scotland.	Geneva.
Above 5 feet 8 inches . . .	55·75 per cent.	24·18 per cent.
Above 6 feet	5·54 „	0·81 „

In this, as in many other examples, facts not strictly comparable will be found to contain some points in which a strict comparison is possible, and these points can be separated by a careful analysis. The paper in the "Edinburgh Medical and Surgical Journal," to which I have referred, contains also some measurements, rarely made, of the circumference of the chest. I subjoin them, that all the information on this subject contained in that paper may be presented at one view, and the necessity for reference to the original work may be avoided.†

GROWTH OF THE BODY.

CIRCUMFERENCE OF THE CHEST, AND STATURE OF ADULT MALES IN DIFFERENT COUNTRIES, COMPARED.

Militia Regiments.

SCOTCH MILITIA REGIMENTS. Max. circumf. 41·01 in. Min. circumf. 38·71 in. Mean circumf. 39·79 in. Max. proportion. 1 1·67 Min. proportion. 1 1·75 Mean proportion. 1 1·71	1.	The following Table, with some slight alterations and the addition of the fourth column, is taken from the "Edinburgh Medical & Surgical Journal," vol. xiii. p. 263 (1817.)			
		Regiments.	Average number of inches round chest.	Average height.	Proportion.
		Highland Lanark. . .	33·71	67·39	1 1·74
		2nd Edinburgh . . .	38·79	68·84	1 1·75
		Kinross	39·07	67·20	1 1·72
		Peebles	39·55	68·38	1 1·72
		2nd Fife.	39·82	67·29	1 1·69
		6th Lanark	39·91	68·60	1 1·71
		2nd Argyll.	40·07	67·74	1 1·69
		1st Argyll	40·09	67·76	1 1·69
		East Stirling	40·09	68·06	1 1·72
		Annan and Eskdale .	40·64	68·15	1 1·67
		Kirkcudbright . . .	41·01	68·59	1 1·67
		Average	39·79	67·93	1 1·71
	It is not stated whether these measurements were made with or without the clothes.				

* M. Quetelet's facts shew that it is not quite completed.

† M. Quetelet, as I understand, is now collecting observations on the stature and growth of the body, and wishes to include this measurement.

When the separate papers on which the facts relating to this subject of the growth of the body have been written amount to a sufficient number to be made up into a book, the title-page and index will assume some such shape as this:*

GROWTH OF THE BODY.				a
				b
STATURE	at different ages		a	c
,,	at the adult age		b	d
,,	in the two sexes		c	e
,,	in town and rural districts		d	f
,,	in the rich and poor.		e	
,,	in factories		f	
CIRCUMFERENCE OF THE CHEST	in adult males		g	g
				h
WEIGHT,	at different ages.		h	i
,,	of adults		i	j
,,	of the two sexes.		j	k
,,	in town and rural districts		k	l
,,	in spirit drinkers		l	m
,,	in rich and poor.		m	n
,,	in factories		n	
	&c. &c. &c.			m
				n
				o
				p
				q
				r
				s
				t
				u
				v
				w
				x
				y
				z

* It must be borne in mind that each letter of the larger index is carried on a separate leaf of paper, and that the subject referred to follows it in order.

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